PART I

Managing Contraceptive Supplies

To properly manage any activity, including contraceptive supplies, a manager must

- Get the necessary information.
- Analyze it.
- Decide what to do.
- Act!

For example, a manager in a family planning clinic could receive a report on the number of cycles of pills dispensed to users in the most recent quarter, calculate the average monthly consumption and notice that it has increased since the last report, analyze how long current supplies of pills will last, find that supplies will run out before the next scheduled shipment, and place an emergency order for pills or borrow some from another facility.

Essential Logistics Data

The person in charge of managing contraceptive supplies at the service delivery site needs to have the following information about each contraceptive product used at the outlet.

- **Stock on hand:** What is the quantity of usable product on hand? (Sources of information: stock cards and physical inventory)
- **Rate of consumption:** What quantity is being dispensed to users each month, on average? (Sources of information: the daily activity register or monthly or quarterly reports)
- **Losses and adjustments:** What quantity of supplies is being lost in the system, and why? (Sources of information: stock cards or other inventory records)

The Stock Card

Each contraceptive product (each brand of each method) in the storage area should have a Stock Card. This card provides essential information on the quantities of stock on hand of that product, any losses or adjustments to the inventory, and lead time. It is sometimes called an Inventory Control Card or, when kept with the supplies, a Bin Card.

The purpose of the stock card is to provide an up-to-date record of all transactions (the quantities of that product that have been received and issued or otherwise disposed of) and the amount currently in stock.

Use the stock card in the following situations:

- *Every time stock is added to the shelf or removed from the shelf.* Enter the date and the amount on the stock card, and calculate the new balance on hand.
- *Whenever a physical inventory is conducted.* The quantity found during the inventory should be written on the stock card. Any difference between the physical count and the calculated balance should be noted in the Loss/ Adjustment column and explained in the Remarks column.
- *Whenever supplies are lost* (such as due to damage or expiration) or there are any other adjustments to the stock quantity such as samples taken to test the quality.

Lead times can be calculated for each product by counting the number of days between the date the order was placed (if the outlet places orders) and the date the supply arrives and is available for use. Both dates should be noted on the stock card.

The card on the next page is just an example. Stock cards can record other important information in addition to that shown in the example, such as the price, source, and expiration date of the contraceptive.

Stock Card

Product: *Combined orals—Lo-Femenal*
Warehouse Location: *Aisle A Row 1*
Stock Number: *47201*

Maximum Stock Level: *4 months*
Minimum Stock Level: *2 months*
Unit of Packing: *100 cycles per box*

Maximum Quantity: *1,360 cycles*
Minimum Quanity: *680 cycles*
Most Recent AMC: *340 (6/98)*

Date	Requisition and Issue		Quantity				Balance on Hand	Remarks
	Voucher Number	From/To	Requested	Received	Issued	Loss/ Adjust		
6/10/98							*880*	*Balance brought forward*
6/15	*322*	*To Dr P*			*200*		*680*	
7/2	*323*	*To Reg Warehs*	*700*					
7/6	*324*	*To Nurse S*			*100*		*580*	
7/10	*323*	*Fr RW*		*700*			*1,280*	

Filling Out the Stock Card

Product should include both the contraceptive method and the brand.

Warehouse location describes where in the storage facility this product is kept (this is needed only if the storage area is large).

Stock number is the number assigned to the product by either the manufacturer or the central warehouse (this may not be necessary in some systems).

Maximum stock level and Minimum stock level refer to the highest and lowest levels that should be maintained for this product at this outlet, expressed as months of supply (the Maximum/Minimum inventory control system is explained on page 13).

Unit of packing is the number of individual pieces contained in the standard package for this product.

Maximum quantity and Minimum quantity are the highest and lowest quantities that should be on hand for this product at this outlet, at current rates of use. The stock levels are multiplied by the Average Monthly Consumption (AMC) to get these quantities (explained on page 16). Write these quantities in pencil, as you must recalculate them regularly. Always express quantities as individual pieces, not as larger units such as boxes or cartons.

Date refers to the date of the transaction being recorded. The date is used to calculate average lead time.

The ***Requisition and Issue Voucher number*** column records the number on the voucher used for the transaction.

From/To indicates where the supplies are arriving from or to whom or to what facility they are being issued.

The ***Quantity Requested, Received, and Issued*** columns are used whenever this contraceptive is ordered/requested, received from the warehouse, or issued from the storage area. Record the amount and date (and voucher number if necessary).

The ***Loss/Adjustment*** column is used to record any non-standard changes to the inventory, such as damaged or expired contraceptives removed from stock, a correction after a physical count, or quantities removed to conduct quality testing.

The ***Balance on Hand*** should be calculated whenever any stock is added or removed. Compare the new total with the maximum and minimum quantities at the top of the card. When a physical count is done, enter the number counted in this column.

The ***Remarks*** column should be used to explain entries in the Loss/Adjustment column and any other needed clarifications.

The Daily Activity Register

The Daily Activity Register records information on every client who comes to the family planning outlet, what contraceptive product she or he received (by method and brand), and how many units were dispensed to this client.

The data in the daily activity register are summarized in monthly or quarterly reports. This dispensed-to-user information is the best kind to use for logistics calculations, because it shows exactly what quantities are being dispensed to users and the rate of consumption (how many units per month).

A daily activity register can be a big sheet of paper or a book. An example is on the next page. The register should collect the following information:

- Date
- Name of client
- Client number (assigned by the program)
- Client type (new client or revisit) if your program tracks clients this way
- Number of units of contraceptives (e.g., cycles of pills, individual condoms, doses of injectable contraceptive) dispensed at this visit, by
  - ✗ Method of contraception (Oral contraceptive, IUD, injectable, Norplant®, condom, foaming tablet, referral for sterilization)
  - ✗ Brand of contraceptive (for example, Oral—Lo-Femenal® and Microgynon®; IUD—Copper T and Multiload)

The daily activity register can also collect other client-specific data your program needs for management and planning. In the example here, the register is used to track referrals for sterilization and natural family planning.

DAILY ACTIVITY REGISTER

Clinic name: Month: Year:

Date	Client name	Client number	Client Type	Quantity of Contraceptives Dispensed at this Visit												Referrals
				Combined Oral Contraceptives			Progestin-Only Orals	Injectables		IUDs			Condoms	Foaming Tablets	Sterilization	Natural Family Plan.
				Microgynon	Lo-Femenal	Eugynon	Ovrette	Microlut	Depo-Provera	Noristerat	Copper T	Multiload	Nova T			
			New													
			Revisit													
			New													
			Revisit													
			New													
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Totals this page:																

The Requisition and Issue Voucher

In facilities that order their supplies, the ***Requisition and Issue Voucher*** (RIV) is used to place an order for supplies and as a receipt when the supplies are delivered. It is signed at each step of the ordering and delivery process.

The RIV should have one original and three copies. One copy should be kept by the person placing the order when the order is placed; a second by the person preparing the shipment; a third by the person receiving the order; and the final copy is returned to the person who shipped the order, as assurance that the shipment arrived. Some programs may wish to have an additional copy for approving officials.

In push or allocation systems where stock transactions are initiated by higher-level facilities, an ***Issue Voucher*** is used instead. This form is completed in quadruplicate by the issuing warehouse, which keeps one copy as a record of shipments in process. Three copies accompany the supplies; one copy is kept by the receiving facility, one is kept by the shipper, and the remaining copy is returned to the warehouse as proof of receipt.

REQUISITION AND ISSUE VOUCHER

Voucher No: _____

Date: _____ **Ship to:** _____
_____
_____

Requisition			Issue		
Article	**Quantity on Hand**	**Quantity Requested**	**Shipped**	**Received**	**Remarks**

REQUISITION
Requested by: _____ Date: _____
Approved by: _____ Date: _____

ISSUE
Approved by: _____ Date: _____
Shipped by: _____ Date: _____

RECEIPT
Received by: _____ Date: _____

ISSUE VOUCHER

Issue Voucher Number: _____

Date: _____ **Ship to:** _____

_____

_____

Serial number	Article	Quantity Issued		Remarks
		Shipped	Received	
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

Approved by: _____ Date: _____

Shipped by: _____ Date: _____

Received by: _____ Date: _____

The Maximum/Minimum Inventory Control System

Using a Maximum/Minimum (Max/Min) inventory control system will help you to prevent both over-stocking (which leads to wasted contraceptives) and shortages or stockouts of contraceptive supplies. A Max/Min system makes sure that the amount of stock on hand is always between established maximum and minimum levels.[1]

In this system, each organizational level of the program is assigned maximum and minimum levels for its supplies. Maximum and minimum ***levels*** are expressed in number of months of supply. For example, a clinic might be required to keep a maximum of four months' worth of supplies on hand of all products and a minimum of one month; a regional warehouse might have a maximum of six months and a minimum of three.

To find out the maximum and minimum ***quantities*** for each contraceptive product, multiply the level by that product's Average Monthly Consumption.

The ***Average Monthly Consumption*** (AMC) is equivalent to one month's supply. It is usually the monthly average of the quantity of that product that has been dispensed to users during the past 3 months. (The information on the quantities dispensed is taken from the daily activity register or summary reports of dispensed-to-user data.)

$$\textbf{Average Monthly Consumption} = \frac{\text{Quantity dispensed in 3 months}}{3}$$

1. The system described here is called a forced ordering system in which all products are ordered on a fixed schedule. To read about other variations of the Max/Min inventory control system, please see the *Family Planning Logistics Guidelines.*

However, if the amount dispensed has been erratic and has not followed a general trend, then the average should be calculated based on the most recent 6 months.

The AMC must be calculated separately for each contraceptive product (method and brand). The AMC should be recalculated regularly, either every time you place an order or on a monthly or quarterly basis.

Worksheet for Calculating Average Monthly Consumption (AMC)

Three-month average

+		Amount dispensed three months ago
+		Two months ago
+		Last month
Total	=	
÷ 3	=	= Average Monthly Consumption

Six-month average

+		Amount dispensed six months ago
+		Five months ago
+		Four months ago
+		Three months ago
+		Two months ago
+		Last month
Total	**=**	
÷ 6	=	= Average Monthly Consumption

Setting Maximum and Minimum Levels

In some family planning programs, maximum and minimum levels are set for all facilities by the central office. If your program does not have an established policy, you may wish to set your own. The instructions here are for a forced ordering pull system, in which outlets order their supplies on a regular schedule. Other systems would set maximum and minimum levels somewhat differently.

To set maximum and minimum levels, follow these steps:

- Calculate your ***Average Lead Time*** by looking at past records of orders and deliveries on the stock cards or copies of the requisition and issue voucher and taking the average. If there are very large variations in lead time in your system, it is safer to use the longest lead time rather than the average.
- Determine the ***Safety Stock***, which is expressed in months and should be equal to at least half the time between regular orders (called the Order Interval or Review Period) or regular deliveries. If there are usually great fluctuations in demand during the year or if deliveries are unreliable, then the safety stock should be set higher.

The ***Minimum Stock Level*** is equal to safety stock (in months of supply) plus average lead time (in months).

Safety Stock (in months)	+	Lead Time (in months)	=	**Minimum Stock Level**

Worksheet for Calculating Minimum Stock Level

Safety Stock (in months)	+	Lead Time (in months)	=	**Minimum Stock Level**
	+		=	

To get the ***Maximum Stock Level***, add the order interval or review period to the Minimum Stock Level.

Minimum Stock (in months)	+	Order Interval Stock (in months)	=	**Maximum Stock Level**

Worksheet for Calculating Maximum Stock Level				
Minimum Stock (in months)	+	Order Interval Stock (in months)	=	**Maximum Stock Level**
	+		=	

Calculating Maximum and Minimum Quantities

The maximum and minimum stock levels (in months) are multiplied by the AMC to get the maximum and minimum quantities.

Maximum stock level (months)	×	AMC	=	**Maximum quantity (number)**
Minimum stock level (months)	×	AMC	=	**Minimum quantity (number)**

Worksheet for Calculating Maximum and Minimum Quantities				
	Maximum stock level			Minimum stock level
×	× Average Monthly Consumption		×	× Average Monthly Consumption
=	= **Maximum Quantity**		=	= **Minimum Quantity**

Whenever you recalculate the AMC, you should also recalculate the maximum and minimum quantities and note the new numbers on the stock card.

Whenever contraceptive supplies are received or issued and the quantities are entered on the stock card, you should compare the new balance on hand with the maximum and minimum quantities. If supplies for any contraceptive commodity fall below the minimum level, ask yourself the following questions.

- Was this an exceptional circumstance, or is demand for that contraceptive generally increasing? If so, recalculate the AMC.
- Are resupplies late in arriving? If so, find out why and whether the problem can be corrected. If not, increase the safety stock level.

Assessing Your Supply Status

To make sure your supplies are adequate, do the following calculation for each of your contraceptive products.

Stock on Hand	÷	AMC	=	**Months of Supply on Hand**

This calculation will tell you how long your current supply will last if consumption stays at the current rate. If the months of supply on hand are less than the time remaining before your next delivery of supplies, then you may need to arrange for an emergency delivery.

Worksheet for Calculating Months of Supply on Hand

Stock on Hand	÷	AMC	=	**Months of Supply on Hand**
	÷		=	

The following is an example of months of supply on hand for four contraceptive products.

Product	Stock on Hand	÷ AMC	Months of Supply
Lo-Femenal® Combined Orals	470 cycles	180	2.6
Ovrette® Progestin-Only Orals	320 cycles	45	7.1
Blue & Gold Condoms	1,200 condoms	420	2.9
Depo-Provera®	520 vials	92	5.7

Ordering Supplies

Whenever you are ready to order supplies, you should recalculate the AMC with the most recent figures and recalculate the maximum and minimum quantities.

To order supplies (from a warehouse) or issue supplies (to an outlet), use the following formula for each contraceptive product:

Maximum Quantity	–	Stock on Hand	–	Stock on Order	=	**Order Quantity**

Worksheet for Calculating Order Quantity	
	Maximum Quantity
–	– Stock on Hand
=	= (Subtotal)
–	– Quantity already on order (but not received)
=	= **Quantity to order**